CITY OF RICHMOND

DEPARTMENT OF PUBLIC UTILITIES

OFFICE OF THE DIRECTOR

November 8, 2010

Water Docket
Environmental Protection Agency
Mailcode: 28221T
1200 Pennsylvania Ave., NW
Washington, DC 20460

Department of Conservation and Recreation
Commonwealth of Virginia
203 Governor Street
Richmond, VA 23219

Re: EPA Water Docket ID No. EPA-R03-OW-2010-0736, Draft Total Maximum Daily Load ("TMDL") for the Chesapeake Bay; and Virginia Chesapeake Bay Watershed Implementation Plan ("WIP")

To Whom It May Concern:

Thank you for the opportunity to comment on EPA's Draft TMDL for the Chesapeake Bay and Virginia's WIP.

We own and operate a municipal wastewater treatment plant ("WWTP") that cleans and discharges highly-treated wastewater within the Chesapeake Bay watershed pursuant to a state-issued National Pollutant Discharge Elimination System ("NPDES") permit.

We are already doing our part for the James River and Bay restoration. The City wastewater treatment facilities are being upgraded to comply with the Richmond WWTP total nitrogen (TN) and total phosphorus (TP) DWF waste load allocations of 1,094,402 and 68,525 pounds per year. The improvements are described as follows:

Contract 1 - Total Phosphorus Control (a fully functioning element on this date): Chemical storage and new feed pumps will be installed to dose ferric chloride in the primary and secondary sedimentation tanks.

Contract 1 - Methanol Feed & Storage: The existing filters will be upgraded to denitrification a filter, which includes methanol storage tanks, chemical metering pumps and controls.

Contract 1 - Filter Upgrades (a fully functioning element on this date): The existing filters will be upgraded to reliably remove particulate phosphorus and nitrogen to meet the new permit limitations of the general permit.

Contract 2 - UV Disinfection: The existing chlorination disinfection facilities will be replaced with UV disinfection to mitigate the adverse impact of any nitrites that may break through the process and cause unstable of disinfection and potential bacteria violations.

Contract 2 - Main Plant Incoming 13.2 kV Switchgear: The existing incoming switchgear and portions electrical distribution system will be replaced, based on a condition assessment. Based on present, concerns for electrical safety, the new switchgear will be installed within a building instead of an outdoor walk-in enclosure.

Contract 3 - Scum Control Upgrades: The existing primary sedimentation tanks will be upgraded with new troughs and electrically actuated gates, which will control scum build-up in the activated sludge process. Scum will be conveyed to a new scum concentrator building.

Contract 4 - Aeration Upgrades: Improvements to the aeration tanks include new internal mixed liquor recycle pumps, and baffles and upgrade of gates and diffuser system.

Contract 4 - RAS Capacity Upgrades: The RAS pumping capacity will be increased to about 60 mgd, which will reduce the solids carryover to the effluent filters during WWF.

Contract 4 - Bioaugmentation Upgrades: The existing sludge holding tanks will be upgraded to accommodate the bioaugmentation process to allow the WWTP staff to restart the activated sludge system faster and shorten the period to recover the nitrification process.

Contract 5 - Final Sedimentation Tanks: Two sedimentation tanks will be added to improve the solid capture efficiency of the final sedimentation tanks and reduce the solids loading to the effluent filters.

Contract 5 - Fermentation: One existing digester will be converted to a fermentation reactor to produce volatile fatty acids (VFA) from primary sludge. The VFAs returned to the anoxic zone are more effective electron donors, improve the efficiency of the denitrification in the aeration tanks and reduces the operating costs associated with the addition of methanol. The upgrades include odor control, transfer pumps, and electrical/instrumentation.

The associated capital cost of these improvements is $113,276,750 with annual O&M costs at completion of an additional $2 million (including chemicals and energy) to the current budget. The rate impact of this debt service and cost is an increase of 5% per year for 20 years.

We have significant concerns with EPA's Draft TMDL and object to EPA's proposed "backstop" actions against the Commonwealth of Virginia and our facility. EPA proposes to cut our facility's stringent nutrient wasteload allocations ("WLAs") currently set forth in Virginia's EPA-approved Water Quality Management Planning Regulation, 9VAC25-720, and Chesapeake Bay Watershed General Permit Regulation, 9VAC25-820 (collectively, the "Virginia Regulations").

EPA is considering these potential cuts under a new EPA guidance letter on "reasonable assurance" and EPA's initial view that Virginia has given inadequate assurance that nonpoint sources (*e.g.*, agricultural sources) will reduce their nutrient loads according to plan. We disagree with EPA's initial view given Virginia's good track record of achieving nonpoint reductions. We also question whether EPA's unpromulgated reasonable assurance guidance is even legal given that EPA previously proposed, but withdrew reasonable assurance regulation.

We strongly oppose EPA's inequitable proposal to transfer more burden to our WWTP and similar point sources. We object to EPA's currently proposed "backstops" (4 mg/L TN and 0.3 mg/L TP at design flow) in lieu of the WLAs in the Virginia Regulations, and we also object to the threatened but not applied "full backstops" that would decrease the concentration basis further (3 mg/L TN and 0.1 mg/L TP at design flow) and even the flow basis to past flow levels (2007 to 2009 average flow rather than design flow).

In addition, as the Chesapeake Bay Program has long ago determined, the James River does not influence mid-Bay water quality and any regulation of James River nutrient discharges should occur only for local water quality protection. Locally, the applicable water quality standard is chlorophyll standard adopted by Virginia in 2005 and approved by EPA. Since adoption of this standard, the State issued the Virginia Regulations governing WWTPs and local governments designed and constructed the required new facilities with long-term debt, which now must be repaid by the public over the next 20 to 30 years.

At this extremely late point in time, EPA has unilaterally changed the computer model it uses to judge the adequacy of Virginia's actions. Virginia, however, has determined in its WIP (September 2010) at pages 14-15 that the chlorophyll standard is faulty and that "additional scientific study is needed to provide a more precise and scientifically defensible basis for setting final nutrient allocations." We agree with this finding and determination by Virginia, and we also support Virginia's "Four Part James River Strategy" at pages 15-17 of the WIP to address these major technical problems. We strongly support the WIP with regard to its wastewater elements at pages 11-12 (Source Sector Strategy for Wastewater), at pages 14-17 (James River), and pages 38-50 (Section 5: Wastewater).

We understand that the Draft TMDL is fundamentally and materially flawed as a technical matter, especially with regards to the James River components. Serious chlorophyll standard and computer modeling deficiencies are thoroughly documented in the comments of the Virginia Association of

Municipal Wastewater Agencies, Inc. ("VAMWA"). We request that EPA fully consider and address all of VAMWA's comments, which we generally support and hereby incorporate by reference as if fully set forth herein.

What is distinctly missing from EPA's Draft TMDL is any appreciation for the major commitments very recently made by EPA and Virginia (the State's adoption and EPA's approval of the Virginia Regulations in 2005 and 2007) and the major financial commitments that local governments have made to implement those requirements.

In conclusion:

1. The City of Richmond (COR) strongly supports the primary use standard of the James River and that the applicable water quality standards should be based on sound scientific and engineering principles protective of that use.
2. COR ratepayers have the highest wastewater rates in the Commonwealth of Virginia for major metropolitan areas (Draper Aden 2010) and the stormwater utility is one of only a handful in the Commonwealth and the only one in the Richmond metropolitan area.
3. The projected COR capital improvement plan program for the Chesapeake TMDL is $30 million for wastewater and $500 – 800 million for stormwater.
4. The recurring annual operating costs for the improvement for the Chesapeake Bay TMDL are estimated in the $100s of millions for wastewater and stormwater.
5. The rate impact of the Chesapeake Bay TMDL improvements has been calculated to increase the wastewater bill to the ratepayers by 4% per year for 20 years and to increase the stormwater bill from $45 per equivalent residential unit (ERU) to $300 – 700 per ERU.
6. Current 10 year COR capital improvements plan program for wastewater and stormwater collection and treatment total in the $10s of millions of dollars for each fiscal year funded by the ratepayers.
7. COR is proactively implementing the stormwater management program through the voluntary establishment of the stormwater utility in difficult economic circumstances.

For further information, please contact me at 804-646-5182.

Sincerely,

Robert C. Steidel
Interim Director Department of Public Utilities

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